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MEMORANDUM

To: THE COMMISSIONER, Arizona Corporation Commission

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Interim Director  
Safety Division

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ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

RE: IN THE MATTER OF THE APPLICATION OF THE ARIZONA DEPARTMENT OF TRANSPORTATION TO CONSTRUCT A NEW GRADE SEPARATED CROSSING AT PRINCE ROAD IN THE CITY OF TUCSON, PIMA COUNTY, ARIZONA AND TO REMOVE THE EXISTING AT-GRADE CROSSING AT PRINCE ROAD AND THE UNION PACIFIC RAILROAD.

DOCKET NO. RR-03639A-11-0093

**Background**

On February 28, 2011, the Arizona Department of Transportation ("ADOT") filed with the Arizona Corporation Commission ("Commission") an application for approval for ADOT to construct a grade separated crossing at Prince Road in the City of Tucson ("City"), Pima County ("County"), Arizona, at USDOT No. 412-487-A, and to remove the existing at-grade crossing at Prince Road and the Union Pacific Railroad ("Railroad") at USDOT No. 741-105-J.

**Geographical Information**

As of 2010, the U.S. Census Bureau puts the City's population at 520,116 and the metropolitan area at 1,020,200. In 2009, Tucson ranked as the 32nd largest city and 52nd largest metropolitan area in the U.S. It is the largest city in southern Arizona and the second largest in the State.

The rail line in this area runs in a southeast to northwest direction, parallel to Interstate 10 ("I-10") and the I-10 Frontage Road. Prince Road is an east to west main arterial with an interchange at I-10. The general area surrounding the railroad crossing is a mix of commercial and industrial businesses. (See Appendix "A")

**PRINCE ROAD**

Prince Road is a four lane roadway at the railroad crossing. Presently, the City is the road authority with jurisdiction over the roadway at the crossing. However, ADOT will become the road authority with jurisdiction of the grade separation prior to the start of construction. Currently, the crossing is protected with flashing lights and gates, as well as cantilever flashing lights and traffic pre-signals for westbound traffic.

ADOT's proposed Prince Road grade separation is part of a broader project that consists of rebuilding I-10 from just east of Ruthrauff Road to just east of Prince Road. As part of the project, I-10 will be lowered to ground level, widened to 8 lanes and paved with concrete. Prince

Road will then be elevated over I-10 and the Railroad's tracks. It will be widened from its current 4 lane configuration to a 7 lane configuration with medians and sidewalks. The final configuration will allow for the removal of the existing at-grade crossing and still allow access to the I-10. The new grade separation will be located approximately 200 feet southeast of the existing at-grade crossing. This project address' traffic congestion at the railroad crossing on Prince Road by allowing all traffic to pass over the railroad tracks.

This project is being funded by the Federal Highway Administration ("FHWA"), the City, Pima Association of Governments ("PAG"), ADOT and the Railroad. The total cost of the entire project is estimated to be \$115 million with the Prince Road grade-separation of the Railroad estimated to be \$5.1 million. Per 23 CFR 646.210, the Railroad is contributing 5% or \$668,178 to the project.

According to PAG's web-site, the Average Daily Traffic ("ADT") taken in December 2009 was 22,976 vehicles per day ("vpd"). Other data on the web-site indicates the estimated ADT for the year 2040 to be 33,000 vpd. The current Level of Service ("LOS") for this four lane road is LOS C for eastbound traffic and LOS A for westbound traffic. The existing AM peak hour volumes for east and westbound traffic on Prince Road are 1,638 vehicles. The existing PM peak hour volumes for east and westbound travel are 1,759 vehicles.

**Note:** The American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 2004, states that the Level of Service characterizes the operating conditions on a facility in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. This is a measure of roadway congestion ranging from LOS A--least congested--to LOS F--most congested. LOS is one of the most common terms used to describe how "good" or how "bad" traffic is projected to be.

The posted speed limit on Prince Road is 45 MPH. Commission Rail Safety Section ("Staff") records, as well as Federal Railroad Administration ("FRA") accident/incident records indicate six incidents at this crossing with one injury and two fatalities. The first accident occurred on June 28, 1979, as a result of an auto stopping on the tracks and being struck by a train. No injuries or fatalities occurred in this accident. The second accident occurred on November 12, 1990, as a result of an auto running thru the downed gates and running into a train. No injuries or fatalities were reported. The third incident occurred on February 12, 2000, and was the result of a train hitting an auto stopped on the crossing with the gate arms down. One injury and one fatality occurred as a result of this incident. A fourth incident occurred on March 14, 2006, as a result of an auto driving thru the downed gate arm. This accident resulted in one fatality. The fifth accident occurred on October 6, 2010, as a result of an auto stopping on the tracks and being struck by a train. No injuries or fatalities were reported. The most recent incident occurred on April 11, 2011, and was the result of an auto stopping on the tracks and being struck by a train. No injuries or fatalities occurred in this accident. Records indicate the warning devices were reported to be working as intended in all six accidents.

Alternative routes from this crossing are as follows: Ruthrauff Road is an at-grade crossing 1.81 miles to the west and Miracle Mile Road is a railroad underpass 1.0 mile to the east of the crossing.

### **Train Data**

Data provided by the Railroad to ADOT regarding train movements through this crossing are as follows:

**Train Count:** 48 total average trains per day (46 freight, and 2 passenger trains)

**Train Speed:** 79 mph passenger / 70 mph freight

**Thru Freight/Switching Moves:** All moves through this crossing are thru freight. (According to Senior Manager of Train Operations, Sam Lopez Sr., there are no switching moves across this crossing.) This crossing is used by Amtrak twice per day, three times per week.

### **Schools and Bus Routes**

There are several schools within the City that are near the Prince Road crossing. They are:

- ✓ Walter Douglas Elementary School @ 3302 N Flowing Wells Rd, Tucson, AZ 85705.
- ✓ Homer Davie Elementary School @ 4250 N Romero Rd, Tucson, AZ 85705.
- ✓ Flowing Wells High School @ 3725 N Flowing Wells Rd, Tucson, AZ 85705.

Per a discussion with Mr. Lewis Carloss, Director of Transportation, 10 buses use this crossing each day including 8 buses with students.

### **Hospitals**

The nearest hospital to the Prince Road crossing is Northwest Medical Center in Marana, which is 4 miles west of the crossing.

### **Hazardous Materials**

ADOT gave the following response when asked about hazardous materials crossing this crossing:

*It is not known how much hazardous materials traffic uses the existing crossing each day.*

### **Zoning**

Staff requested that ADOT provide information regarding the type of zoning in adjacent areas from the crossing. The following was their response:

*Surrounding area is zoned for Industrial-1 to the West and East. An area to the Southeast of the crossing is zoned for a RV Park.*

**Spur Lines**

ADOT gave the following answer regarding spur lines located in the area:

*Unknown if railroad spurs have been removed within a 10 mile radius.*

**Grade Separation**

A study was started in the 1990's to improve the I-10 from Tangerine Road to Interstate 19 ("I-19"). This study was completed in early 2000 and included the grade separation of Prince Road from I-10 and the Railroad. This project is anticipated to be advertised for a contractor by the summer of 2011, and go to construction in the fall/winter of 2011. The grade separation of the Railroad will take place in the first year of the project. Full construction is anticipated to take 24 months. ADOT will be responsible for constructing and maintaining the grade separation. ADOT is requesting that the Railroad be given 30 months from the date of the signed Commission Order to remove the at-grade crossing signals and surface.

**Crossing Closure**

Prince road will be closed to the general public early in the construction of the new overpass structure. The at-grade crossing may be used by contractor traffic until the new overpass is complete, at which time the railroad will complete the closure of the at-grade crossing.

**Staff Conclusions**

Having reviewed all applicable data, Staff supports ADOT's application. Staff believes the grade separation and the elimination of the at-grade crossing is in the public's interest and is reasonable. Staff believes that the measures proposed by ADOT are consistent with other similar grade-separated crossings in the State and will provide for the public's safety. Staff supports ADOT's request to allow the Railroad 30 months after a signed Commission Order, to remove the at-grade crossing. Therefore, Staff recommends approval of ADOT's application.



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Originator: BHL



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This 27th day of May, 2011 to:

Docket No. RR-03639A-11-0093

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